Volume 4, Issue 3, 2026

Frontier in Medical & Health Research

ISSN: (e) 3007-1607 (p) 3007-1593

DIGITAL HEALTH LITERACY AND READINESS TO ADOPT TELE-PHYSIOTHERAPY AMONG DOCTOR OF PHYSICAL THERAPY STUDENTS IN BAHAWALPUR, PAKISTAN: A CROSS-SECTIONAL SURVEY

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DOI: https://doi.org/10.5281/zenodo.23312690

Keywords

Tele-physiotherapy; telerehabilitation; digital health literacy; eheals; UTAUT; physiotherapy education; adoption intention; Pakistan

Article History

Received: 10 February 2026
Accepted: 25 February 2026
Published: 20 March 2026

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Abstract

Background: *Tele-physiotherapy expanded rapidly during and after COVID-19 pandemic, but its sustainable integration depends on a future workforce that is both digitally literate and willing to adopt it. Evidence on the digital health literacy (DHL) and adoption readiness of physiotherapy students in low-income settings like Bahawalpur and even in Pakistan remains scarce.*

Objective: *To assess DHL and readiness to adopt tele-physiotherapy and to identify predictors of its adoption, among Doctor of Physical Therapy (DPT) students in Bahawalpur, Pakistan.*

Methods: *In this cross-sectional survey, 200 penultimate- and final-year DPT students from five institutions completed 8-item eHealth Literacy Scale (eHEALS) and a Unified Theory of Acceptance and Use of Technology (UTAUT)-based instrument measuring performance expectancy (PE), effort expectancy (EE), social influence (SI) and facilitating conditions (FC), with adoption intention (AI) as the outcome. Data were analyzed with independent-samples t-tests, one-way ANOVA, Pearson correlation and multiple linear regression; effect sizes were reported alongside p-values using SPSS version 26.0 keeping level of significance at* α *<0.05.*

Results: *Students reported moderate-to-high DHL (mean 28.9/40, SD 5.4) and positive adoption intention (3.89/5, SD 0.70). DHL correlated with AI (r = 0.26) and with all UTAUT constructs (r = 0.23–0.48; all p < 0.01). In the regression model (adjusted* R^2 *= 0.40), PE (*β *= 0.30), EE (*β *= 0.31) and FC (*β *= 0.20) independently predicted AI (all p ≤ 0.003), whereas DHL and SI did not. Adoption intention did not differ significantly by gender (p = 0.058; d = 0.37), prior telehealth experience (p = 0.71) or institution type (p = 0.44), but differed across academic semesters (p = 0.001;* η^2 *= 0.08).*

Conclusions: *DPT students in this setting were digitally capable and broadly willing to adopt tele-physiotherapy. Their intention was driven by perceived usefulness, ease of use and access to supporting resources rather than by digital health literacy per se. Embedding competency-based telehealth training within the DPT curriculum and ensuring institutional digital infrastructure may convert this latent readiness into competent practice.*

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ISSN: (e) 3007-1607 (p) 3007-1593

INTRODUCTION

Physiotherapy is a contact-intensive profession that has traditionally depended on in-person assessment, manual therapy and supervised exercise. Over the past decade, however, the delivery of rehabilitation has been reshaped by digital health technologies, and the COVID-19 pandemic accelerated this shift by forcing a rapid move to remote care [1,2]. Tele-physiotherapy; the provision of physiotherapy assessment, exercise prescription, monitoring and education through synchronous video, telephone or application-based platforms; has since moved from an emergency substitute to an established component of contemporary practice.

A growing evidence base supports its effectiveness. Systematic review and meta-analytic evidence indicate that real-time telerehabilitation produces improvements in physical function and pain that are comparable to conventional face-to-face care for a range of musculoskeletal conditions [1] and more recent meta-analytic work reports benefits for both physical and psychological outcomes in older adults [3]. Narrative reviews across physical medicine and rehabilitation similarly describe expanding applications alongside persistent barriers such as limited physical examination, reimbursement uncertainty and variable digital access [4,5]. Patient satisfaction with telehealth is generally high, particularly where it improves access and reduces travel [6].

Whether these gains are realized in routine care depends less on technology itself than on the people expected to deliver it. Two intersecting constructs are central. The first is digital health literacy (DHL); the ability to seek, understand, appraise and apply health information from electronic sources; operationalized by Norman and Skinner's eHealth Literacy Scale (eHEALS) [7,8]. Lower digital literacy is associated with reduced use of digital health services and risks widening existing health inequalities [9]. The second is behavioural readiness to adopt technology, most commonly framed through Unified Theory of Acceptance and Use of Technology (UTAUT), in which performance expectancy, effort expectancy, social influence and facilitating conditions shape intention and use [10]. UTAUT and its variants have been applied extensively to telehealth adoption among health professionals and students, with perceived usefulness and facilitating conditions repeatedly emerging as dominant drivers [11,12].

Most of this evidence originates in high-income countries with mature digital infrastructure. In low and middle-income settings the context differs markedly: uneven internet access, limited institutional resources and thin exposure to digital rehabilitation during training may all constrain adoption. Within Pakistan, studies of practicing doctors report only average knowledge of telemedicine despite a generally favorable attitude and identify inadequate training, low technological literacy and weak infrastructure as principal barriers [13,14]. Study among medical students in Lahore likewise found desirable overall DHL but specific weaknesses in appraising the reliability and relevance of online information [15]. Physiotherapy students; who will constitute the near-future rehabilitation workforce; have received little attention and evidence from Bahawalpur, a regional educational hub, is absent.

Two further gaps are notable. First, DHL and technology-acceptance have usually been examined separately, even though they are conceptually linked: a student may own a device yet lack the skills to use digital health tools or be skilled yet unwilling to adopt telehealth. Second, tele-physiotherapy specifically, as opposed to telemedicine broadly, has rarely been studied in physiotherapy students in this region. Accordingly, this study aimed to (i) assess level of digital health literacy and readiness to adopt tele-physiotherapy among DPT students in Bahawalpur; (ii) examine the association between DHL and adoption intention and UTAUT constructs; and (iii) identify independent predictors of adoption intention.

Methods

Study design and setting

This was an analytical cross-sectional survey conducted across five institutions offering Doctor of Physical Therapy (DPT) program in Bahawalpur, Pakistan: The Islamia University of Bahawalpur (IUB), Bahawalpur Medical and

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ISSN: (e) 3007-1607 (p) 3007-1593

Dental College (BMDC), Shahida Islam Medical College, Agile Institute of Bahawalpur and Tahseen Cheema Institute of Health Sciences. Data were collected over a four-month period from October 2025 to January 2026 following ethical approval.

Participants and sampling

Eligible participants were DPT students enrolled in fourth and fifth years of five-year program (7th–10th semesters), who will be expected to engage with digital health and telerehabilitation in forthcoming clinical practice; students in first to third years (1st–6th semesters) and those unwilling to participate were excluded. Participants were recruited within each institution proportionally to its DPT enrolment according to stratified random sampling. Questionnaires were administered on site during scheduled sessions. Of 200 questionnaires distributed, 200 were returned complete (response rate 100%), reflecting in-person administration.

Sample size

The required sample size was estimated with Raosoft calculator for a finite target population of approximately 323 students, a 5% margin of error, a 95% confidence level and a conservative 50% response distribution, yielding 196; this was rounded to 200. The achieved sample of 200 also provided an adequate case-to-predictor ratio (40:1) for a five-predictor multiple regression, exceeding conventional minima.

Instruments

The questionnaire comprised three parts. Part A captured demographic and contextual variables (age, gender, semester, prior telehealth exposure, average daily internet use). Part B measured digital health literacy using the 8-item eHealth Literacy Scale (eHEALS), rated on a 5-point Likert scale and summed to a total score of 8-40 [8]. Part C measured technology-acceptance using a UTAUT-based instrument comprising four subscales; performance expectancy (PE), effort expectancy (EE), social influence (SI) and facilitating conditions (FC), four items each; and a four-item adoption-intention (AI) outcome scale, each item rated 1-5 and averaged per construct [10]. Internal consistency of each scale in present sample was assessed with Cronbach's α

Data collection procedure

Institutional permission was obtained from administration of each institute. Researchers then attended each site, explained purpose, nature and voluntary basis of the study and obtained written informed consent before distributing questionnaire. To respect local cultural norms, data collection was conducted by researchers of same gender as participants.

Statistical analysis

Analyses were performed in IBM SPSS version 26.0. Continuous scale scores were summarized as means and standard deviations and categorical variables as frequencies and percentages. Independent samples t-tests compared adoption intention and DHL by gender, prior telehealth experience and institution type (government vs. private); where Levene's test indicated unequal variances, Welch-corrected statistic was used. One-way ANOVA compared scores across academic semesters. Pearson correlation quantified associations among DHL, UTAUT constructs and AI. Multiple linear regression, with AI as dependent variable and DHL and four UTAUT constructs as predictors, identified independent predictors. Standardized effect sizes, Cohen's d for t-tests and η^2 for ANOVA, were computed to complement significance testing and regression assumptions (linearity, normality of residuals, homoscedasticity and multicollinearity via the variance inflation factor) were examined. Statistical significance was set at $p < 0.05$.

Ethical considerations

Ethical approval was granted by the Ethical Review Committee of the Department of Physical Therapy, The Islamia University of Bahawalpur. Written informed consent was obtained from all participants, participation was voluntary and responses were anonymized and used solely for research purposes.

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Results

Participant characteristics

All 200 participants provided complete data. The sample was predominantly female (168; 84.0%), consistent with gender profile of DPT programs in institutes and weighted toward final year, with 44.0% in 10th semester and 34.0% in 8th. Only 28 students (14.0%) reported any prior telehealth experience. Internet use was high, 44.0% reported more than five hours daily and a further 36.0% three to five hours. Participants were drawn from IUB (47.5%), BMDC (20.0%), Shahida Islam Medical College (14.5%), Agile Institute (12.5%) and Tahseen Cheema Institute (5.5%); IUB constituted government sector (95; 47.5%) and remaining four institutions the private sector (105; 52.5%). Characteristics are summarized in Table 1.

Table 1. Participant characteristics (n = 200).

Variable	Category	n (%)
Gender	Male	32 (16.0)
	Female	168 (84.0)
Academic semester	7th	19 (9.5)
	8th	68 (34.0)
	9th	25 (12.5)
	10th	88 (44.0)
Prior telehealth experience	Yes	28 (14.0)
	No	172 (86.0)
Daily internet use	< 1 h	3 (1.5)
	1–3 h	37 (18.5)
	3–5 h	72 (36.0)
	> 5 h	88 (44.0)
Institution	IUB	95 (47.5)
	BMDC	40 (20.0)
	Shahida Islam	29 (14.5)
	Agile Institute	25 (12.5)
	Tahseen Cheema	11 (5.5)
Institution type	Government	95 (47.5)
	Private	105 (52.5)

Digital health literacy and adoption readiness

Students reported a moderate-to-high level of digital health literacy (mean 28.91/40, SD 5.44) and a positive intention to adopt tele-physiotherapy (mean 3.89/5, SD 0.70). All UTAUT constructs scored above the scale midpoint: performance expectancy (3.71, SD 0.77), facilitating conditions (3.68, SD 0.65), effort expectancy (3.58, SD 0.79) and social influence (3.38, SD 0.69), the last being the lowest. Descriptive statistics and scale reliabilities are presented in Table 2.

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Table 2. Descriptive statistics and internal consistency of study scales (n = 200).

Scale	Items	Possible range	Mean	SD
Digital health literacy (eHEALS)	8	8–40	28.91	5.44
Adoption intention (AI)	4	1–5	3.89	0.70
Performance expectancy (PE)	4	1–5	3.71	0.77
Effort expectancy (EE)	4	1–5	3.58	0.79
Social influence (SI)	4	1–5	3.38	0.69
Facilitating conditions (FC)	4	1–5	3.68	0.65

Group comparisons

Adoption intention did not differ significantly between male and female students (4.10 vs. 3.84; $t(198) = 1.91$, $p = 0.058$), although the effect size was small-to-moderate ($d = 0.37$) and comparison was limited by the small number of male participants. Digital health literacy showed a similar non-significant pattern by gender (30.59 vs. 28.59; $t(198) = 1.92$, $p = 0.056$; $d = 0.37$). Neither adoption intention nor DHL differed by prior telehealth experience or by institution type (all $p \geq 0.44$). In contrast, adoption intention differed significantly across academic semesters ($F(3,196) = 5.56$, $p = 0.001$, $\eta^2 = 0.08$, a medium effect), whereas DHL did not ($F(3,196) = 0.54$, $p = 0.655$, $\eta^2 = 0.01$). Group comparisons are summarized in Table 3.

Table 3. Comparisons of adoption intention and digital health literacy across subgroups.

Comparison	Groups (mean ± SD)	Test	p	Effect size
AI by gender	M 4.10 ± 0.54; F 3.84 ± 0.73	$t(198) = 1.91$	0.058	$d = 0.37$
DHL by gender	M 30.59 ± 5.08; F 28.59 ± 5.47	$t(198) = 1.92$	0.056	$d = 0.37$
AI by telehealth exp.	Yes 3.84 ± 0.81; No 3.89 ± 0.69	$t(198) = 0.37$	0.712	$d = -0.07$
AI by institution type	Govt 3.84 ± 0.57; Priv 3.92 ± 0.81	$t(187.9) = -0.78$[a]	0.436	$d = -0.11$
DHL by institution type	Govt 29.01 ± 5.89; Priv 28.82 ± 5.03	$t(198) = 0.25$	0.805	$d = 0.03$
AI by semester	7th–10th semester	$F(3,196) = 5.56$	0.001	$\eta^2 = 0.08$
DHL by semester	7th–10th semester	$F(3,196) = 0.54$	0.655	$\eta^2 = 0.01$

AI, adoption intention; DHL, digital health literacy.

Correlations

Digital health literacy correlated significantly and positively with adoption intention ($r = 0.26$, 95% CI 0.12–0.38) and with every UTAUT construct, most strongly with facilitating conditions ($r = 0.48$) and effort expectancy ($r = 0.47$) and least with performance expectancy ($r = 0.23$). Adoption intention was most strongly associated with effort expectancy ($r = 0.54$) and performance expectancy ($r = 0.53$). All correlations were significant at $p < 0.01$ (Table 4).

Volume 4, Issue 3, 2026

Frontier in Medical & Health Research

ISSN: (e) 3007-1607 (p) 3007-1593

Table 4. Pearson correlations among study variables (n = 200; all p < 0.01).

	DHL	AI	PE	EE	SI	FC
DHL	1	.26	.23	.47	.41	.48
AI	.26	1	.53	.54	.33	.41
PE	.23	.53	1	.49	.25	.35
EE	.47	.54	.49	1	.45	.39
SI	.41	.33	.25	.45	1	.34
FC	.48	.41	.35	.39	.34	1

Predictors of adoption intention

The multiple regression model was statistically significant, $F(5,194) = 27.39$, $p < 0.001$, and explained 41.4% of variance in adoption intention ($R^2 = 0.414$; adjusted $R^2 = 0.399$). Performance expectancy ($\beta = 0.30$, $p < 0.001$), effort expectancy ($\beta = 0.31$, $p < 0.001$) and facilitating conditions ($\beta = 0.20$, $p = 0.003$) were significant independent predictors, indicating that students were more inclined to adopt tele-physiotherapy when they perceived it as useful, easy to use and adequately resourced. Neither digital health literacy ($\beta = -0.09$, $p = 0.183$) nor social influence ($\beta = 0.09$, $p = 0.179$) predicted adoption intention independently, despite their significant bivariate correlations (Table 5).

Table 5. Multiple linear regression predicting adoption intention ($R^2 = 0.414$; adjusted $R^2 = 0.399$; $F(5,194) = 27.39$, $p < 0.001$).

Predictor	B (SE)	β	t	p
(Constant)	1.124 (0.284)	—	3.97	< 0.001
Digital health literacy	−0.012 (0.009)	−0.09	−1.34	0.183
Performance expectancy	0.275 (0.059)	0.30	4.70	< 0.001
Effort expectancy	0.279 (0.064)	0.31	4.33	< 0.001
Social influence	0.088 (0.065)	0.09	1.35	0.179
Facilitating conditions	0.214 (0.072)	0.20	2.99	0.003

Discussion

This survey of 200 DPT students in Bahawalpur found a workforce under training that was moderately to highly digitally health literate and broadly willing to adopt tele-physiotherapy, even though only one in seven had any prior telehealth exposure. Critically, adoption intention was driven by perceived usefulness (performance expectancy), perceived ease of use (effort expectancy) and access to resources and support (facilitating conditions), which together with other constructs explained approximately 40% of variance in intention. These three UTAUT drivers are precisely those that dominate technology-acceptance findings across health settings [10-12], and their prominence here suggests that determinants of adoption among Pakistani physiotherapy students are broadly congruent with international patterns.

The most instructive result is what did not predict intention. Although digital health literacy correlated positively with adoption intention at the bivariate level ($r = 0.26$), it did not survive as an independent predictor once the UTAUT constructs were entered and its coefficient reversed sign. This pattern is consistent with statistical suppression arising from shared variance: DHL was strongly correlated with effort expectancy ($r = 0.47$) and facilitating conditions ($r = 0.48$), so its association with intention appears

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ISSN: (e) 3007-1607 (p) 3007-1593

to operate largely through students' sense that technology is easy to use and adequately supported, rather than through a direct, independent effect. The practical reading is not that digital literacy is unimportant, students who are more digitally capable also feel more able and better resourced, but that literacy alone is insufficient to generate intention; usefulness, usability and infrastructure are proximal levers. Social influence showed the same correlate but not predictor pattern and was lowest-scoring construct, implying that peer and faculty encouragement, while present, is a weaker force than the perceived attributes of the technology itself.

The observed readiness aligns with international evidence. Physiotherapy students in Australia expressed strongly positive attitudes toward telehealth and a clear appetite for further training [2] and the effectiveness literature, comparable outcomes to in-person care for musculoskeletal conditions and benefits for older adults, provides a credible rationale for that optimism [1,3]. The finding that adoption intention differed across academic semesters, while DHL did not, suggests that willingness to adopt may be shaped more by progression through clinically oriented training than by generic digital skill, which was already uniformly high; the specific pattern awaits post-hoc clarification. The absence of a significant gender difference contrasts with reports of higher DHL in males among university and medical student samples [15,16]; the small proportion of male participants here (16%) limited power to detect such a difference, as reflected in the small-to-moderate effect size at a borderline p-value.

These findings have concrete educational implications. Because intention is driven by perceived usefulness, ease of use and facilitating conditions, curricular strategies are likely to be most effective when they move beyond generic digital-literacy instruction toward competency-based, hands-on telehealth training that lets students experience tele-physiotherapy as useful and usable, coupled with institutional investment in reliable connectivity, devices and technical support. This is consistent with calls—both within Pakistan and internationally—to formally embed telehealth education in health-professions curricula [2,13,14]. Equipping graduates in this way may also extend rehabilitation access to the rural and underserved populations for whom in-person physiotherapy is least available.

Strengths and limitations

Strengths of this study include a focus on an under-studied population and setting, use of two established instruments, a complete dataset and an analysis that pairs significance testing with effect sizes. Several limitations should temper interpretation. First, cross-sectional design precludes causal or temporal inference among literacy, acceptance and intention. Second, all measures were self-reported and collected in a single administration, introducing potential common method and social desirability bias that may inflate cross-construct correlations. Third, although recruitment was proportional across institutions, on-site administration and resulting 100% response rate indicate a non-probability sample and marked female predominance limits both generalizability and power of gender comparisons. Finally, the study was confined to a single city, so extrapolation to other regions of Pakistan should be cautious. Future work should use multi-site, longitudinal and mixed-methods designs, incorporate objective literacy assessment, and measure actual tele-physiotherapy use and its barriers and facilitators.

Conclusion

Doctor of Physical Therapy students in Bahawalpur were digitally capable and broadly ready to adopt tele-physiotherapy, but their intention was governed by how useful, easy and well-supported they perceived it to be rather than by digital health literacy in isolation. Translating this latent readiness into competent practice will require embedding competency-based telehealth training within DPT curriculum and ensuring institutional infrastructure and support that make technology usable. Doing so would help prepare next generation of physiotherapists for an increasingly digital rehabilitation landscape and widen access to care for underserved communities.

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ISSN: (e) 3007-1607 (p) 3007-1593

Availability of data and materials: The datasets analyzed during the current study are available from the corresponding author on reasonable request.

Competing interests: The authors declare that they have no competing interests.

Funding: This research received no specific grant from any funding agency.

Acknowledgements: The authors thank the participating institutions and students.

REFERENCES

Cottrell MA, Galea OA, O'Leary SP, Hill AJ, Russell TG. Real-time telerehabilitation for the treatment of musculoskeletal conditions is effective and comparable to standard practice: a systematic review and meta-analysis. Clin Rehabil. 2017;31(5):625–638. https://doi.org/10.1177/0269215516645148

Davies L, Lawford BJ, Chan C. Physiotherapy students' attitudes toward the use of telehealth in clinical practice: a cross-sectional survey. Health Sci Rep. 2024;7(4):e2067. https://doi.org/10.1002/hsr2.2067

Man SS, Wen H, Chiu KT, Wang F, Chan HS. Effectiveness of telephysiotherapy in improving older adults' physical and psychological outcomes: a systematic review and meta-analysis. Healthcare (Basel). 2024;12(17):1775. https://doi.org/10.3390/healthcare12171775

Tenforde AS, Hefner JE, Kodish-Wachs JE, Iaccarino MA, Paganoni S. Telehealth in physical medicine and rehabilitation: a narrative review. PM R. 2017;9(5S):S51–S58. https://doi.org/10.1016/j.pmrj.2017.02.013

Lee AC, Davenport TE, Randall K. Telehealth physical therapy in musculoskeletal practice. J Orthop Sports Phys Ther. 2018;48(10):736–739. https://doi.org/10.2519/jospt.2018.0613

Kruse CS, Krowski N, Rodriguez B, Tran L, Vela J, Brooks M. Telehealth and patient satisfaction: a systematic review and narrative analysis. BMJ Open. 2017;7(8):e016242. https://doi.org/10.1136/bmjopen-2017-016242

Norman CD, Skinner HA. eHealth literacy: essential skills for consumer health in a networked world. J Med Internet Res. 2006;8(2):e9. https://doi.org/10.2196/jmir.8.2.e9

Norman CD, Skinner HA. eHEALS: the eHealth Literacy Scale. J Med Internet Res. 2006;8(4):e27. https://doi.org/10.2196/jmir.8.4.e27

Neter E, Brainin E. eHealth literacy: extending the digital divide to the realm of health information. J Med Internet Res. 2012;14(1):e19. https://doi.org/10.2196/jmir.1619

Venkatesh V, Morris MG, Davis GB, Davis FD. User acceptance of information technology: toward a unified view. MIS Q. 2003;27(3):425–478. https://doi.org/10.2307/30036540

Gagnon MP, Orruño E, Asua J, Abdeljelil AB, Emparanza J. Using a modified technology acceptance model to evaluate healthcare professionals' adoption of a new telemonitoring system. Telemed J E Health. 2012;18(1):54–59. https://doi.org/10.1089/tmj.2011.0066

Garavand A, Samadbeik M, Nadri H, Rahimi B, Asadi H. Effective factors in adoption of mobile health applications between medical sciences students using the UTAUT model. Methods Inf Med. 2019;58(4–5):131–139. https://doi.org/10.1055/s-0040-1701607

Ashfaq A, Memon SF, Zehra A, Barry S, Jawed H, Akhtar M, et al. Knowledge and attitude regarding telemedicine among doctors in Karachi. Cureus. 2020;12(2):e6927. https://doi.org/10.7759/cureus.6927

Frontier in Medical & Health Research

ISSN: (e) 3007-1607 (p) 3007-1593

Alam L, Alam M, Malik AM, Faraid V. Is telemedicine our cup of tea? A nationwide cross-sectional survey regarding doctors' experience and perceptions. Pak J Med Sci. 2021;37(5):1319–1325. https://doi.org/10.12669/pjms.37.5.3970

Farooq Z, Imran A, Imran N. Preparing for the future of healthcare: digital health literacy among medical students in Lahore, Pakistan. Pak J Med Sci. 2024;40(1):14–19. https://doi.org/10.12669/pjms.40.1.8711

Bonaccorsi G, Gallinoro V, Guida A, Morittu C, Ferro Allodola V, Lastrucci V, et al. Digital health literacy and information-seeking in the era of COVID-19: gender differences emerged from a Florentine university experience. Int J Environ Res Public Health. 2023;20(3):2611. https://doi.org/10.3390/ijerph20032611

Scott Kruse C, Karem P, Shifflett K, Vegi L, Ravi K, Brooks M. Evaluating barriers to adopting telemedicine worldwide: a systematic review. J Telemed Telecare. 2018;24(1):4–12. https://doi.org/10.1177/1357633X16674087